

ORAL HYGIENE

OCTOBER 1916 VOL.6 NO.10.



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ORAL HYGIENE

EDITED BY WM. W. BELCHER, D.D.S.



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PUBLISHED MONTHLY

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Exchange your Old Precious Metals for Ney's Solders

A Texan dentist wrote that he is *satisfied* to buy *old golds* from his local dealer, but *much prefers* to send his *gold scrap* to us!

It will be easier, Doctor, to consign your "scrap" to your dealer and ask him to exchange *its full equivalent* for Ney's Golds. But if he will not supply you with Ney's Golds, send your scrap *direct to us*. We'll ship promptly in exchange the Solder or Golds you order. Like many others, you'll be *happy* over the results.

'Tis regrettable that a few dealers still cling to the hoary *heresy* that "dentists like to be charged all that the traffic will bear." That's a colossal *fallacy*. It's time those dealers *woke up*.

*Why don't you try
Ney's Golds?*

The game of the elusive "pea under the shells" is *played out*. Good dentists do *not* gamble, but *demand scientific work*. Do you know that thousands of them find its *highest* expression in Ney's "World's Best" Golds, which for nearly 105 years have been *leaders* in the dental field, and so *remain*?

Order them *today*, whether you sell your scrap to your dealer or consign it to us! It will *not* pay you to experiment. Besides, *why* should you? when we did the experimenting, at *our* expense, many years ago.

Be sure to instruct your lab. to use only *Ney's for you*. But unless you mention *Ney's*, you may get something that you would not *willingly risk* on your patients. That's all. Thank you.



Send us your Old Gold, Old Silver, Old Platinum, etc. to be exchanged for their equivalent in Ney's Golds or Solders.

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ORAL HYGIENE

A JOURNAL FOR DENTISTS

VOLUME VI.

OCTOBER, 1916

NUMBER X.

THE DENTAL DISPENSARY IN PEACE AND WAR



THE school dental dispensary of Germany and its early position as leader in this work were made possible by the encouragement of the government. Germany needed good soldiers—millions of them—and it was worth while to begin with the child and build its body sound and strong. Such children made good soldiers, or the mothers of good soldiers, which is quite as important.

The insurance association, which insures to every adult a pension in his old age and into which every child is taken at fourteen years, had its influence as it was vitally

interested in the child's welfare as a future policyholder. The school authorities were also concerned as it assured less absence and better progress in their studies. But most of all, it fitted in with the scheme of military preparedness. In spite of a high tax rate supporting a military machine with taxes that would have created a riot in America, the school dental dispensary in Germany became an established fact. At the beginning of the war there were perhaps about one hundred such institutions and a large number of cities contemplating early action.

In time of war the local dispensary in Europe has been used exclusively for the need of the army in making plates, filling teeth and relieving suffering, as well as repairing broken jaws and wounds of the face. We will have full detail of this after the close of the war. Dr. Ernst Jessen, for a quarter of a century actively in-



A Bunch of "Rookies" Entering The Forsyth For Dental Treatment.

terested in mouth hygiene, and at the head of the work in Strasburg, Germany, in a letter to the editor appearing in the March, 1915, issue of this magazine, says: "It is a natural sequence that the school work should give way to the military needs. We have placed our school clinic entirely at the disposal of the army and there are now at work seven military dentists with nine dental technicians. Every day there are some two hundred soldiers treated. Since the beginning of hostilities, a total of twelve thousand have been taken care of. About ten thousand extractions took place, and among this number treated we consider this a small average. When we find it impracticable to extend conservative

treatment, extraction has been resorted to and five thousand sets of artificial teeth have been provided. Adjoining the dental station, we provide a medical station to care for the wounds of the jaws and face. Here there are five dentists and four technicians. A correct number of the dentists now active in the field can be found in the weekly German dental review. The number now amounts to eight hundred and ten."

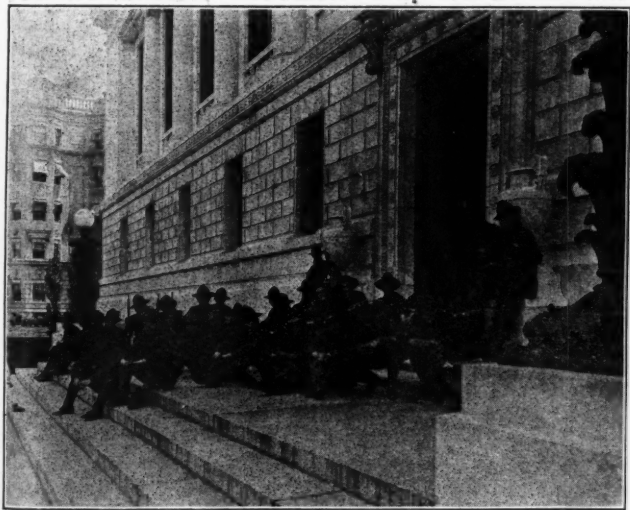
In America, we had no insurance association to help, although the Metropolitan Life Insurance Company are taking an active interest as a health measure among their policyholders, and at the company building in New York City, a well-equipped dental dispensary is maintained to

examine the teeth of employees and relieve suffering. The government has not recognized the necessity of caring for the teeth of the child as an army measure. This could hardly be expected, when they have only come to realize the need of attention to the teeth of the soldier. The school authorities, realizing the necessity of a child who is physically fit and the absurdity of providing a teaching force and expensive equipment to children suffering from bodily ills and unable to assimilate the instruction so carefully prepared, have been the recognized factor in establishing the dental dispensary in our schools. The medical profession through its health officers and others big enough to appreci-

ate the need have co-operated to this end.

Private philanthropy, as expressed in the Forsyth and the new Rochester dental dispensary, has also materially aided in bringing the importance of this work to the notice of the general public.

With the mobilization of American troops for the Mexican border, the necessity of dental attention for the soldier has been presented with telling force. Dentists and dental dispensaries, wherever located, have co-operated to the best of their ability. The Forsyth Institute, by arrangement with the authorities of the Commonwealth of Massachusetts, the Adjutant-General and the Surgeon-General, have cared for the teeth of 409 men in two days, with



Ready For The March Back To Camp.



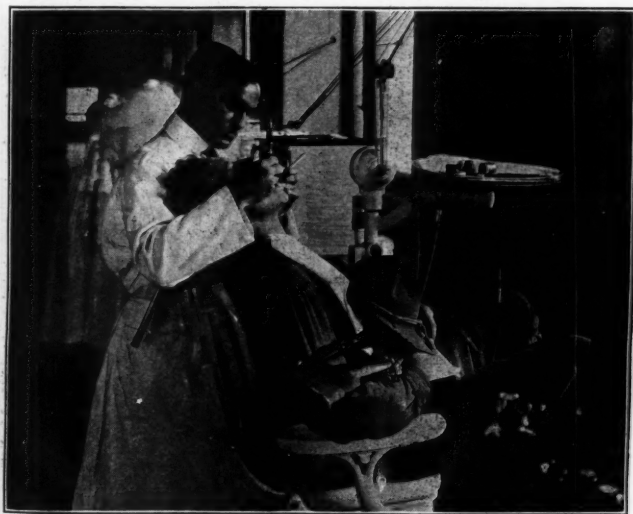
Dr. Harold D. Cross (Left) Director and Mr. Thomas Forsyth (Centre)
Founder of the Forsyth Infirmary.



A Detail of Soldier Boys Receiving Treatment.



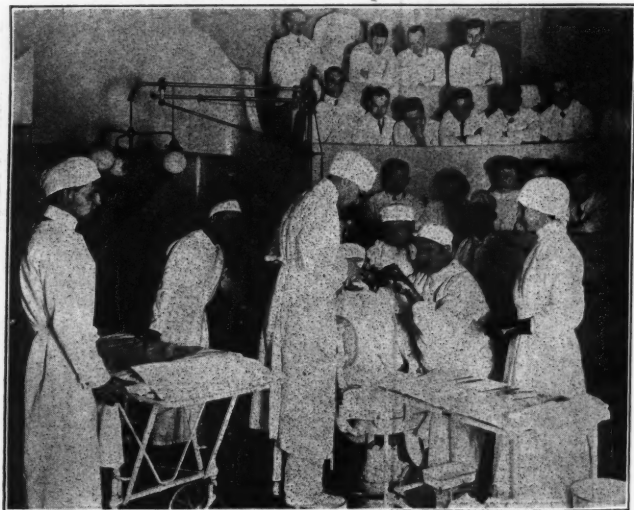
One Side of The Big Operating Room.



The Soldier and The Dentist.



Yet what danger shall he fear
When his mother hovereth near,
And he hears her cheering call:
"All-Aloney?"
—Eugene Field.



The Operating Amphitheatre.



In The Children's Waiting Room.



Soldier Patients.

65 chairs in use most of the time for this period. One thousand nine hundred and sixty-two fillings, 188 cleanings, 211 silver nitrate applications and 271 extractions were performed during the short time available. No difficulty was met in adapting the equipment, designed for the children, to the needs of the recruit needing dental attention. The pictures show the men marching into the building, the big infirmary room, and the operating force busily engaged. How would you like to operate for a man with a gun in his lap, ready for trouble? The other pictures speak for themselves and give one a glimpse of the work accomplished by this beautiful dispensary designed for the need of the children and so easily assuming the work of "preparedness."

The dental work at the Forsyth was only a part of that necessary for the Massachusetts contingent, for at the Framingham camp 3,126

members of the National Guard were treated by the Dental Unit—this in addition to 1,275 teeth extracted—all of which is contained in a report made to the surgeon-general by the Unit commander, Dr. Theodore E. La-Fayette. Surgeon-General Cole paid the Unit high compliment and stated that individual members, besides giving their time to the work, had paid for a large amount of material used in treating the men. The report follows:

"To the Surgeon-General: Please find enclosed the information which you requested. In behalf of the Dental Unit, I desire to thank you and the Medical Corps for the kind treatment extended to us at the muster field. A great many improvements could be made in our dental clinic—such as the lighting, sterilization and water supply, but owing to the prevailing uncertainty of time at the camp we tried to make the most of what we had. The work at the field has been of very great interest to us, and if we have done nothing more than aid a few to enter or continue in the service of the United States Army we shall have felt our time well spent. Army life is fascinating and it is with regret that we feel our stay is nearly over—but look forward with the fond hope that some day we may be in the service as dental surgeons.

"At any rate we are all proud to have served our country in a dental unit which

we feel is the first of her kind in the history of the American army. Whether in the service or in private life, we shall always stand ready and eager to serve America in whatever capacity she may call us.

"Thanking those who have so kindly given us the oppor-

tunity to be of some service to our country and for the kind treatment at the muster field, I beg to remain,

"For the Dental Unit,

"Sincerely yours,

"(Signed)

"T. E. LAFAYETTE, D.M.D."

"Days on duty—twenty (July 1-21).

"Seven operators constantly on duty (visiting): Dr. Theodore E. LaFayette, Jr., Mr. Harold W. Crowell, Dr. Stanley C. Keene, Dr. Angelo Luciabo, Dr. John Thomas, Dr. Roy Smith, Dr. Walter Kennedy.

"Patients examined	3126
Cleaning	900
Cement	521
Silver	675
Extractions	1273
Gas N ₂ O	219
Chloroform	2
Novocaine	176

"Treatments—

Pericementitis (loose bridge-work).....	11
Alveolar abscess	37
Antrum infection (X-ray taken, cases cleared)	1
Plates (partial)	37

"Mouth Lesions noted	19
----------------------------	----

"Material used—

48 Bottles of white copper cement.	
24 Bottles of white silver alloy.	
5 Pounds of mercury.	
24 Tubes of cocaine.	
50 "E" novocaine tablets.	
1 Box temp. stopping.	
1 Box C matrix.	
2 Sets assorted burrs.	
11 Large tanks of N ₂ O.	
7 Small tanks of oxygen.	
1 Gallon of alcohol.	
2 Quarts liquor antiseptic.	
50 Corrosive sublimate tablets.	
11 Pounds pumice.	
1 Quart glycerin.	
48 Clean white coats.	
15 Bottles cleanoid solution.	
7 Rolls of rubber dam."	



Children waiting for treatment or those invited in for "The Story Hour" are entertained and a lecture on "Preparedness" is one of the features. Lucky Boston Children!

In view of the work of the dentists abroad, particularly the dental contingent of the American Hospital in France and the activity displayed during the mobilization of our troops for the Mexican border, the dental dispensary, as well as the manufacturing establishment capable of furnishing munitions, is a part of American preparedness in case of war. Europe re-sounds with the tread of millions of marching men, the rattle and clash of arms and the accoutrements of war. Everywhere the dark clouds of conflict spreads its terrors, accompanied by the wailing

and weeping of women and children. No one desires our beloved country to be plunged into such a conflict as this, and, if we read the signs right, liable to be two years more before it is brought to a close. But in such event, every dental dispensary will be utilized for war purposes. Granting this to be true, it is an added argument for school dispensaries in every part of the land. Viewed in this light, it is a patriotic duty and, while under our form of government, national aid cannot be expected, it is a part of good citizenship to aid in their establishment and maintenance.



HOT WAVES FROM LOUISVILLE DURING N. D. A. CONVENTION

J. WRIGHT BEACH, D.D.S., Buffalo, N. Y.

The writer believes in attending dental meetings, particularly the National. His experiences are interesting and most of them truthful.

HERE'S a little tip to the unwisely wise who stayed at home from the National Dental Association meeting at Louisville, during the hottest week of a superheated summer: Don't do it again! Just go anyway and in blind faith depend upon the judgment and horse sense of the officers to do the rest. They made good several times over, not only in the subject matter that came before the different sections, but also in their selection of the local committee who did themselves proud in their lavish dispensation of "Southern hospitality," that mystical, elusive and seductive quality of the Southland made famous in antebellum days and which conveys to the Northern mind an extenuated, three-story glass of savory mint julep with "The Colonel" sitting opposite and the radiant "cullud gemman" at your elbow whose greatest aim in life is to avoid the unspeakable possibility of an empty glass even hesitating in front of the "committee on dispensation."

The vaguest thought of experiencing such a possibility has, through decade after decade, thrilled our solar plexus with delights akin to the tingle of the celestial harp intermingled with spasms of

ecstasy that has suffused our cold-blooded being with radiance of supremest glory. What, then, I prithee, could have transported your humble servant nearer to the unalloyed fulfillment of life's sweetest dream than to find himself the palpitating subject of a "chair clinic" under the somniferous influence of the best mummeeled-mint julep that Kentucky could produce? All of which occurred on the feather edge of a glorious Sunday eventide, after "mine host," Dr. J. W. Clark, of the previously mentioned local committee, had whisked a happy party through Louisville's matchless parks in his near-flying machine and had alighted at the Seelbach hangar, two floors below terra and in a temperature maintained at 65 degrees. Had we gone up instead of down, we might have been within hailing distance of Beulahland, but in such supreme enchantment our downfall was complete.

When we came to next morning, we were astounded that the consummation of such a glorious dream could leave such a dark-brown taste and the familiar, "Have a sample, doctor," of the Sal Hepatica man would have been as the sweetest music to

our hyper-juleped senses. However, white ribbon being unknown in Southern mercantile circles, we were unable to fortify our ante-breakfast resolves by that insignia of enforced abstemiousness and, therefore, were subjected to intermittent attacks by the "Southern Hospitality" committee throughout the entire meeting.

Hot, did you say? "Lo'd bless you, doctah, this is the hottest weathah we evah had in Kentucky. Just happened so. Pow'ful sorry, doctah! Will you have the same?" An important part of the dentist's education is the faculty of looking convinced of the truth of whatever a professional brother may tell him and we pride ourselves on the acquirement of a sufficient amount of this necessary quality to prove our sense of the eternal fitness of things, especially while recipient of unlimited quantities of the before mentioned S. H. Therefore, we believe we have justly earned the right to mentally use the question mark when our friends endeavor to "put it over on us."

We were taught that heat plus moisture forms the proper menstrum for bacterial growth. Judging from the general and, apparently, equal distribution of these basic elements at a working ratio of 99 to 1, the germicidal dentists in attendance at Louisville should have spent the balance of their vacations in the office sterilizer. Ye editor, attest.

A bit of advice: go early and stay late. An early introduction to Miss Happiness is always to be desired. Her smile is refulgent, her arms outstretched and her welcome sincere. That is the reason more than fifty "early birds" were entertained by Dr. W. E. Grant, Dean of the Louisville Dental College, at his beautiful home on the terrace hillside overlooking Cherokee Park. There was no question about the quality of the welcome or the material evidences that accompanied it. Both host and hostess simply radiated the spirit of hospitality and the hour spent in their presence was one of the most delightful of the whole meeting.

Why should we, at this time, dwell on the more serious part of the convention? Profound dissertations there were in abundance! Searchers after a new and defenseless bug whose back was broad enough to carry the blame of a thousand "itises," were as thick as rattles on a Ford! Even Dave Adams, after Cartercaring four hundred miles from Chicago, was still searching for the bug of "autoitis."

Methinks 'tis well that we should direct your thoughts into lighter and more pleasing channels and recount a few of the happenings and, mayhap, misfortunes that came to a few of our greater lights. Frinstance: T. P. Hinman and Otto King, as every one knows, constituted as efficient a pair of hustlers

as ever managed our meetings. With a gavel made of wood taken from the home of Thomas Jefferson and some other notable dear to the heart of the Southerner, and presented by the Kentucky State Dental Society, President Hinman could not do otherwise than wield it with dignity and precision. This distinction was eminently befitting the striking character and personality of our president, who is a typical southern gentleman of a period that has spanned the coalescence, as it were, of the old and the new South. To know such a man is not only a pleasure; it is a positive delight. His passage from the presidency has but facilitated his permanent entrance into the hearts of his brother dentists. He will always represent the very best element of our profession in the South.

Speaking of Otto King, we would remind the few who do not already know, he is "all wool and a yard wide" at the smallest diameter. This is neither "jolly" nor praise—just unfermented truth. Where could the N. D. A. find a better qualified secretary and editor? He has placed Huntington, Ind., on the main line; and now that the "Son of the common people," that grand old Hoosier poet, has left for parts unknown, nothing stands between Otto and the goal of his greatest ambitions. As an organizer, harmonizer and fraternizer, he is qualified to

enter the advanced art class and would have a walk-away in the Life Membership contest. A benign smile, an honest eye and a quality of composure which at once bespeaks a comprehensive grasp of his life's work, combined with a spirit of determination that assures the completion of every worthy undertaking; such is a brief word picture of our secretary-editor and carries with it an assurance that the welfare of our association will be carefully safeguarded.

However, if our past president reached high-water mark in every respect, we can assure the fellows that the new incumbent is some boy for reaching high levels and bids fair to keep his breathing apparatus well above the surface, whether it be placid or rolling in breakers. Dr. Barber will put together a great program and Little Old Manhattan will see to it that you go back home broke. Cut out the time now and begin to fill the nickel bank.

We have no desire to be personal relative to certain occurrences at Louisville, but so long as Harvey Burkhart doesn't give a rap about getting any more offices, we cannot injure his cause by showing him up as he really is. It is legion that an unsavory reputation will stick to a fellow closer than a plaster impression, and when the Louisville press announced that Dr. Harvey J. Burkhart, Mayor of Batavia, N. Y., was among the notables attending the

convention, that he was known to be the greatest lobbyist of the dental profession and was head-over-heels in everything political in his section, everyone marveled at the source of information and the unusual truthfulness of the press. However, judging from certain characteristic and forceful expressions that escaped Harvey anent these published remarks, one might surmise that he was not entirely pleased therewith. We sincerely regret his displeasure because we gave out the information and meant it as a distinct compliment to one of our most distinguished citizens. What we should have said is, that Harvey Burkhart is a man whose friendship is valued for its sterling worth and those who are privileged to enjoy its closest relations come as near to a feeling of real affection for him as they should have for anyone outside their own families. If we were jollyng or looking for favors we might say more; but occasionally it does us good to write a full sentence of actual truth. We will, however, fortify that one by saying that Mr. George Eastman could not have selected a man better qualified to act for him in the construction, establishment and management of the great Rochester Dental Dispensary. A magnificent work is in store for Dr. Burkhart that will fittingly round out a career of unusual usefulness to his profession and to humanity in general, the good results of

which will be transmitted from generation to generation as long as man shall exist. Can you imagine a more satisfactory mission for a real man in the world's work than this? Harvey, we congratulate our profession and the whole civilized world for the benefits which your services will accomplish.

The cartoonist at Louisville had the time of his young life in an attempt to sketch the facial lineaments of some of our handsomest men about the Seelbach lobby during their frantic efforts to look like a glass of icewater sitting on a red-hot stove. The artist was most successful in transferring to paper this happy mood of Dr. A. C. Rich, of Saratoga Springs, vice-president of the New York State Dental Society. All joking aside, with a well-shaped bean crowned with an adequate supply of pure silver hirsute, a faultless levator labii superioris alequi nasi supporting matchless mustachios, gently uplifting at each extremity, due to long hours of diligence and cosmetic, and accompanied by a serenity of countenance worthy of a better cause, gave the onlooker the right to surmise that his genealogy might be traced back through a long line of icemen reaching to the frozen age. But, bless you, no one can gainsay the warmth of heart radiating underneath the upper left hand pocket of that hand-me-down Palm Beach. In this happy state the artist caught him

just as he recounted to his astonished listeners of the Southland how, in '64, he amused himself catching the gun and returning each one with a death-dealing message. Thus could he accurately tell the number of opponents added to the roster of the Eternal City through his wonderful skill. Many another equally truthful tale was drawn from the richness of his store until the "Good Night" at the end of the reel broke up the party. From an equally reliable source we learn that, since his return, his time has been much occupied accepting challenges, which we regret exceedingly as we dislike the inconvenience of a break in our line of officers.

We cannot consider the cavity properly finished without mentioning Louey Meisburger's "tummy ache." Hadn't you heard of it? Strange, for it was one of the biggest things at the convention. At least, Louey said so, and Rob Murray testified in the affirmative. Louey, you know, is on so many committees in the National that his offices can best be described as "Committee of the Whole," hence, a two-day session en private with physical infirmities materially interfered with many com-

mittee meetings, particularly those held in the Rathskeller. Rob Murray, you should know, is president of the New York State Dental Society, and Louey says if he makes half as good a president as he does nurse, all previous records will look like a sheet of blank paper, and Louey is taken as some authority up our way.

At any rate stay-at-homes missed the part of the convention that never appears on the program and which furnishes the real diversion and fun so thoroughly enjoyed by the tired dentist. To grasp the hand of an old acquaintance or college chum and know that someone is really and truly glad to see you again, is a part of the meeting that cannot be transmitted by "absent treatment" or parcel post. You've got to be right there with your own fist to do it.

If more dentists would get the reckless habit of closing the office two or three days each year for the purpose of getting acquainted with themselves and some of the other prominent men in the profession, it would be of great benefit to themselves and the dental depots in general. Kindly let these thoughts find permanent lodgment under your occipito-frontalis.



MEDICAL EDUCATION---A SIXTEEN YEARS' SUCCESSFUL CAMPAIGN

The *Journal of the American Medical Association* publishes each year an educational number. The issue of August 19 contains thirty-two pages devoted to the medical colleges of the United States and Canada. Some of the subjects are: Statistics of medical colleges—Distribution of medical students by states—Number of medical students—Number of medical graduates—Those holding degrees in arts—Women in Medicine—Tuition and other fees—Description of colleges—A shaded map of the United States graphically displays the state requirements of preliminary education demanded. It is pitiless in its dissection and without fear or favor. All of this is accompanied by the following editorial, an abstract of which follows. The italics used are ours.

IN the year 1900, The Journal began collecting statistics regarding medical colleges, students and graduates, and in 1901 the first Educational Number was published. There were 159 medical colleges included in the statistics. At that time it was a matter of common knowledge that many of the colleges then existing were joint-stock corporations, conducted largely for the profit of their owners; that by many of the colleges little or no attention was paid to admission requirements, and that conditions in medical education were far from satisfactory. The medical schools with endowments, with well-equipped laboratories, or with six or more salaried teachers, could be counted on one hand. Sectarian medicine had reached its zenith in 1901, there being twenty-two homeopathic and ten eclectic colleges. In all colleges included in the statistics, there was an enrolment of 26,417 students, and of these 5,444 graduated.

By the collection and publication of such data, in 1901, a beginning was made in the great campaign for the im-

provement of medical education. The information published provided a fixed point from which future progress could be measured. The statistics were collected and published annually for five years, however, when it became evident that, if improvements were to be made, there would need to be a permanent committee, with a permanent secretary and with adequate funds at its disposal to centralize its efforts in this particular field and persistently work for improvement, using such influence and authority as could be exerted by a voluntary organization such as is the American Medical Association, and using also the greater power of publicity, particularly that which was available through the columns of *The Journal*. The statistics collected and published by *The Journal*, therefore, showed the necessity, and led to the creation of a permanent committee of the American Medical Association—the Council on Medical Education—which, as one of its lines of work, would continue the collection and publication of these statistics. Although

created in 1904, the Council did not complete its organization and employ a permanent secretary and secure fixed headquarters until in December, 1905. It had already prepared two standards of medical education, however, one referred to as "the standard now recommended," and the other as "the ideal standard," and pamphlets had been issued setting forth these standards. The Council had also held its first annual conference on Medical Education which, repeated in successive years, became a powerful factor in its subsequent campaign. Another strong factor in the success of the Council's campaign was that *from the beginning it had the hearty and gratifying support from the officers of a large majority of the medical colleges.*

By January 1, 1906, permanent headquarters had been established, and the campaign by correspondence with medical colleges and licensing boards urging the adoption of the standards, had been begun. Then also was begun a careful study of medical education, and permanent files for the information were started. In 1907 the first complete list of foreign medical colleges was prepared, which revealed the fact that *this country alone had more medical schools than all the rest of the world.* Facts regarding the histories of all medical colleges in the United States, existing and extinct, were collected. To secure more reliable information re-

garding the work of the various medical colleges, in 1907 and 1909, respectively, two complete tours of inspection were made, and the first two classifications prepared, the second of which was published in 1910. A special campaign was carried on in cities in which two or more weak medical colleges existed, urging that such institutions merge and in that way form one stronger institution.

By 1910, the number of medical students had been reduced from 28,142 to 21,526, the number of graduates from 5,600 to 4,440, and the number of medical colleges from 162 to 131. Meanwhile, many of the institutions had undergone a remarkable internal development; better teachers had been employed, better buildings erected, new laboratories established, and better clinical facilities secured. Furthermore, a remarkable improvement had been made in entrance standards. The number of medical colleges requiring for admission, in addition to a high school education, one year of collegiate work, had been increased from five to thirty-five, and eight state licensing boards had adopted a similar standard of preliminary education for those who were to secure licenses to practice medicine in those states. Through the inspections and other means of verifying the data collected, the information published each year in the Educational Number was verified

and made more reliable. A chart was published showing the educational standards of the European countries in comparison with those of the United States.

During the second five year period of the Council's work, between 1910 and 1915, the general study of medical education was continued. The information regarding medical colleges, existing and extinct, was perfected sufficiently to enable the publication of a life chart by means of which, for the first time, an accurate knowledge could be had as to the number of medical colleges existing in the United States in any year since the Department of Medicine of the College of Philadelphia—now the University of Pennsylvania—was organized in 1765. To secure a better record of the history and educational qualifications of medical students, and facts regarding their promotion from class to class, a medical student's register was established. Here, again, the Council received the earnest support and a gratifying co-operation from the majority of medical colleges. Two other complete inspections of medical colleges were made, and two new classifications published.

During this second five-year period, twenty medical colleges were merged with others, and nineteen became extinct, thus further reducing the total number from 131 to ninety-five. The number of students also was reduced

from 21,526 to 14,891, and the total number of graduates from 4,440 to 3,536. *Meanwhile, the number of medical colleges which had adopted the one or two years of collegiate work for admission was increased from thirty-five (twenty-seven per cent.) to eighty-three (eighty-eight per cent.), and the number of state licensing boards holding to these higher requirements was increased from eight to twenty-eight.* Not only had 88 per cent. of all medical colleges adopted the higher entrance requirements, but also through the reliable information collected by the Council, the methods employed by each college in admitting students, and the strictness with which the standards were enforced, were known with fair accuracy. *The continuous agitation for better conditions in medical education had appealed to philanthropists to such an extent that endowments for medical education had been greatly increased, and large gifts for medical buildings, new laboratories, scholarships, endowed chairs and teaching hospitals had become of frequent occurrence.* The fall of 1914 witnessed the general adoption of higher entrance qualifications, namely, one or more years of college work, including courses in physics, chemistry and biology. The standard which, in 1905, had been termed "ideal," became the required minimum in 1914. At the beginning of that season,

forty-three medical colleges, for the first time, began the enforcement of the higher requirements.

During 1915-1916, the further extension of this requirement of preliminary education from one to two years of collegiate work, in addition to the high school education, was urged and, in June, 1916, the Council was instructed by the House of Delegates not to retain in Class A, after January 1, 1918, any medical college which was not requiring for admission that standard of preliminary education. This action was by no means drastic, since the two years of college requirement has already been put into effect by forty-six medical colleges; it has also been adopted by seventeen licensing boards as the minimum standard of preliminary education of those who are to receive the license to practice medicine in those states.

Coupled with its instructions to the Council regarding the requirement of two years of premedical college work, the House of Delegates adopted the statement of its reference committee on medical education that *this represented the highest preliminary qualification that should be legally exacted in this country*. It is evident, therefore, that the struggle by the medical colleges to reach higher entrance standards will have its fixed limit, and that their attention may hereafter be directed toward other needs, such as larger endowments,

more salaried teachers and more abundant and better used clinical material.

The readers of this Educational Number will doubtless share in the gratification that such marvelous improvements have been made in a brief sixteen years. In fact, the progress has far exceeded the highest expectations of those who were acquainted with the serious conditions existing at the time the campaign for improvement began. *Many institutions which were conducted for the profit of their owners have been closed; the number of high-grade, well-equipped, and well-endowed medical colleges, however, has been greatly increased, and a permanent American standard of preliminary education has been established.* A fixed basis has been reached on which medical education in this country can be built. In fact, it already has reached a stage which is quite satisfactory and can be referred to with something like pride. This country already has a score or more of medical schools which in every particular are equal, if not superior, to those to be found in any other country. Under a continuance of the campaign for improvement, others will be added to this group, and the number of colleges conducted by those who are in the game for personal gain and who disregard reasonable educational standards are becoming fewer each year. There is a most hopeful outlook for the future.

STANDARDS FOR DETERMINING THE SUITABILITY OF PATIENTS FOR ADMISSION TO A FREE DISPENSARY

BORDEN S. VEEDER, M.D., St. Louis, Mo.

This is an abstract of an article appearing in The Journal of the American Medical Association, issue of July 8, 1916, and is of great interest to every member of the Dental profession. Only ten per cent of our working population are said to have an income of one thousand dollars per year, and it is clearly shown that a family of five with an income of less than this amount cannot pay for medical or dental services. Only ten per cent of the people in America are patronizing the dentist. Perhaps this is all that can really afford to do so under present conditions and circumstances. The higher dental fees are placed, and it would seem that it is necessary to place them high in order to provide the latest and best in dental service, the fewer people are to be benefited. Certainly if one is to avail himself of the best service of the dentist and physician, he should have an income of several thousand dollars. The returns of the income tax for 1914 show conclusively that only one and a half per cent. of our total population have incomes of four thousand dollars or more.

N December, 1914, three distinct out-patient clinics connected with the Washington University Medical School were merged into one dispensary, moved to a new location and in a distant part of the city, and the old clinics closed. The increasing number of the clientele was much greater than that of the three former separate clinics combined, and it was thought necessary to establish a social service department to determine the worthiness of those applying for relief. A committee of three was appointed, of which the author was one, to get in touch with a number of the larger clinics in the country to obtain their standards of admission.

In Philadelphia the medical men, it was stated, had almost no interest whatever in the matter. It was their practice to admit a family for treatment whose income was

seventy dollars a month, or less—and this a family of five.

Baltimore had no standards of admission nor any financial investigation.

Cleveland admitted patients providing the income was from fifty to eighty dollars a month.

Boston worked on the standard of a yearly wage of one thousand dollars for a family of four or five. The patient was interrogated by the admitting physician, who made up his mind as to the need of the family without any definite financial standard. In the opinion of the correspondent this financial investigation, so-called, was worthless.

As a result of this research it was shown that there was no established standard in use by which to judge the suitability of dispensary applicants, and no classification

of patients in the majority of clinics, except by diseases.

Medical dispensaries are classified by the writer as—

First: A means of collecting material for the teaching of clinical medicine.

Second: A means of furnishing free treatment to the indigent poor, who for social or economic reasons are unable to pay for the services of the physician.

The first of these classifications—needing material for the purpose of instruction—might, with propriety, lower its standard for admission, as it is not a purely philanthropic institution, and the end in view justifies the purposes for which it is done. It is hardly consistent for a physician who has enjoyed the benefits of a thorough medical education—the average cost of instruction for the four years being around three thousand dollars, and the tuition charges from six hundred to eight hundred dollars—to object to a clinic connected with a medical school on the ground that the clinic lessens the financial returns from private practice.

In an attempt to meet the results of economic conditions persons are often forced to accept private charity for what in reality is society's duty as a whole and properly should be a burden of the state. It should not be necessary for a few individuals and the medical profession as a whole to bear the burden of these economic conditions. In the older

cities and countries of Europe it is well recognized that the state must care for those persons who are ill and improvident, and various types of industrial, health and unemployment insurance associations have been devised.

In America we are rapidly coming to this point of view, and in January, the present year, a bill was introduced into several of the State Legislatures, through the efforts of the Social Insurance Committee of the National Association of Labor, specifying compulsory health insurance for all families earning less than one hundred dollars a month. Within the next few years it is expected that such a bill will undoubtedly pass many of our State Legislatures; and until some such form of insurance is established the free clinic is apparently the only solution of the problem which will furnish an efficient type of service at the lowest possible cost to those persons who are deserving of free treatment.

In setting a financial standard there is a certain minimum figure or income below which there can be no question as to the financial suitability of an applicant for treatment. In a broad aspect this figure should be one which allows for a decent standard of living and includes adequate food, clothing and shelter, for without these three things health will suffer and the race will undergo a physical degeneration.

There are two methods of obtaining family budgets. One of these is to figure out theoretically the least a family of a given size could live on. This method, though frequently used, is inaccurate. The second method does away with theory and ascertains the cost of living by tabulating the actual budgets or amount spent by families of different sizes.

In many respects the most valuable study in this line was made by Chapin* nine years ago. Although the actual figures are in many respects no longer of much value, because of the subsequent increase in the cost of living, the method used has served as a model for subsequent investigations. His figures are based on the so-called "normal family" of five persons: the working man, the woman at home and three children under fifteen years of age, and were obtained by compiling the actual figures of a large number of families in regard to the income, and the detailed expenditures for food, clothing, lodging, heat and fuel, insurance, health and sundries. His conclusions were that from \$600 to \$700 a year income is wholly inadequate to maintain a proper standard of living; with an income of \$700 to \$800 a family can barely support itself. His final conclusion is that an income of

\$825 a year is barely sufficient for the average family of five to maintain a proper standard of living in New York City.

It is thus shown that a "normal family" is just able to eke out a normal living on \$800, providing no emergency, such as ill health, arises. These figures are for 1907, and since that time the cost of living has increased some 16 per cent.

The New York State Factory Investigation Commission, using Chapin's methods, and the New York City Board of Estimates, which studied the cost of living for unskilled laborers, recently issued reports, the conclusions of which are that \$876.43 and \$840.18, respectively, are the necessary income for the maintenance of the average family of five in the city of New York. A table is here given of the conclusions of these two reports and an itemized account of the expenditures. It includes \$21 a year for health, physicians' and dentists' services and medicine for five persons. It makes no provisions for savings, as the insurance is only for burial insurance:

These figures are the yearly wage and are not based on a monthly or weekly earning, as it has been shown that in many cases the weekly wage must be 20 per cent. higher to compensate for periods of unemployment.

*Note—Chapin: *Standards of Living Among Workingmen's Families in New York City, New York, 1907.*

COST OF LIVING FOR A NORMAL FAMILY IN NEW YORK.

Items	Board of Estimate	N. Y. S. Factory Commission	Average
Food.	\$380.00	\$325.00	\$352.50
Rent.	168.00	200.00	184.00
Clothing.	104.00	140.00	122.00
Fuel and Light. . .	42.00	20.00	31.00
Car Fare.	30.30	31.20	30.75
Insurance.	22.88	35.60	29.24
Health.	20.00	22.00	21.00
Sundries.	73.00	102.63	87.81
Totals.	\$840.18	\$876.43	\$858.30

In an investigation of 745 patients, made in New York City in 1910; 672, or 90 per cent., were worthy of free treatment. A recent similar investigation, covering 1,881 patients applying for admission to the Boston Dispensary, showed that only two per cent. were able to pay for the services of a private physician. A recent investigation at the Presbyterian Hospital in Philadelphia showed that "abuse" was a very minor factor (two per cent.).

Washington University Dispensary, St. Louis, as a result of an investigation, determined that but two patients in every hundred applying were not deserving of free treatment. To make an investigation that is really worth while, it costs from 30

cents to 50 cents for each patient, and Washington University clinic spends nearly \$100 a month in the matter of investigation to avoid this so-called dispensary abuse, which is somewhat larger than is spent by any other clinic in the United States for the same purpose.

It would seem that the problem of dispensary abuse is in reality not so big as it is generally considered. Investigation shows that the actual percentage of abuse, where an effort is made to eliminate it, is small, and that but two per cent. of the patients being treated in the Washington Dispensary are financially unsuitable for treatment; and the various means so far suggested to eliminate this two per cent. are impractical.

In the Note and Comment department for July, the editor criticized the advertising matter sent out by the manufacturers of the Goslee crown. It is our regret that this should have been construed as a personal attack as we have no desire but to sing the praise of this particular porcelain and keenly appreciate its value when its use is indicated. We do wish to voice our disapproval of such advertisements as tending to commercialize our profession. Especially injurious are they to the young practitioner, as placing financial returns above service and moral obligation to the patient.

CORRESPONDENCE

Editor Oral Hygiene:

Your kind letter in answer to my last asking for Oral Hygiene pamphlets and enclosing a remittance, part of which to be applied toward the cup, is before me.

As a helper, you are a whirlwind and I am pleased to acknowledge the receipt of material and very kind letters from the several quarters to which you referred my request. I am in a position to appreciate your services as I know full well just what it means to lay other work aside and write these kind of letters. The one letter may not mean much, but several, as you have evidently written, do; and how often you respond to other requests of various natures you alone can probably tell. Well, that is your penalty for being in the limelight. I have received a lot along the line I wanted and I thank you for your help. Should anything good come to your notice that you think I could use, I should appreciate it if you would clip it and mail to me.

I am going to enclose a clipping that speaks for itself. The essays were from the three youngest grades in the school, it being deemed best to delay the awarding of prizes for the higher school, until next term. You will see how the idea of bugs has taken hold of the little minds, and I assure you the word picture I painted for them would have caused a "wop"

to scrub up at least once. To make it sink deeper, I passed the little booklets, "The Joy of Living," among them, opened to the page showing the microscopic enlargements of several kinds of bacteria, each plainly named. These are issued, as you doubtless know, by the Dentinol and Pyorrhocide Company, and I am constantly finding use for them in my office as the pictures speak volumes.

In the lower school, three of the children complained that their parents would not buy them a toothbrush, but the battle must have been won, for on the third day the chart that each teacher kept for me shows that these also were brushing their teeth and keeping in the "Clean Race." I had fine support from the principal, who was at one time a licensed nurse, and the teachers were very loyal to the cause also.

In five days the average of those who cleaned their teeth daily increased about three hundred per cent.

I have been clipping articles from dental journals and even a few paragraphs from some of the printed president's reports that contained the thoughts that I wanted the children to take home with them. These I have not used, as only those in the higher grades could use them, but they will furnish material for the essays that we will have them write later.

The dentists here are all with me and we can lead the world if they stay at their guns.

Incidentally, did you ever know of a community that had a dentist for every three hundred population in it? Well, that's us. Some dentists, isn't it. Add to this the fact that outside of the immediate community for a distance or radius of one hundred miles there are not to exceed two hundred persons, and you have a problem that I have been trying to solve, but haven't so far. Personally, I am comfortably busy and receive fees from twenty to fifty per cent. higher than those charged by others, but I am wondering about some of the others. I am friends with all and my office is ever ready to lend or help and I make it a point to run in to see them at least once in two weeks and oftener. While I am mentioning strange things, what do you think of this letter being written at ten minutes of twelve, midnight, and no artificial light in the room? For the past several nights we have played tennis till close to eleven o'clock. "Some country."

Thanks again for your assistance and incidentally for the compliment you contemplate of reprinting our association report. Glad somebody appreciates our bunch of dentists.

Faternally,

CHARLES DAGGETT, D.D.S.,

Seward, Alaska.

June 27, 1916.

Editor Oral Hygiene:

There are many "illusions" these days upon sanitary topics, and Dr. Sullivan's patient and evidently Dr. Sullivan himself, as shown by his letter in your August number, are laboring under one of these.

White enamel and glass have been the craze for some time past as exemplifying the highest type of sanitary construction; an error, of course, for a white enamel cabinet can harbor just as many, and no more, millions of bugs as one made of mahogany, if it receives no better care.

Glass has been and is considered the ideal material for cleanliness, and rightly, too, and yet this patient refers to "a dirty old glass tumbler that every one uses." Of course, if a dentist furnishes "a dirty old glass tumbler" to his patients, that is not a reflection upon the glass, but upon the dentist; and if a patient is willing to use such a glass, no one else need worry.

Personally, I do not like to use paper cups; do not use them at home, and if not there, why in the office? At home, our table silver, china and glass are kept clean, bright and fit for us to use, and therefore, fit for any of our friends. In our office, our tumblers receive the same care that all other instruments receive, and are used by us, and, therefore, fit for our patients.

A used glass is not allowed to dry, but rinsed and placed in a copper vessel filled with

hot water over a lighted gas burner. At stated times, those tumblers are removed, well washed with soap and water, rinsed and polished and are then just as fit and much more attractive in appearance and to use than any paper cups.

By the way, has Dr. Sulli-

van or his patient ever seen any paper cups manufactured? The writer has. A glass tumbler, from its shape and nature, is particularly adapted to ideal cleanliness.

Yours very respectfully,

C. EDMUND KELLS, D.D.S.,
New Orleans, La.

THE PRO AND CON OF ROOT CANAL TREATMENT

DR. CHAS. A. BURBRIDGE, Grand Rapids, Mich.

WHAT are we going to do with our root canals? This is the question which today presents itself to every progressive, earnest member of our great profession. This is the question that is commanding the attention, and serious attention, too, of every one of us who has the future of his patient, the future of his personal standing in the profession, and dentistry itself, at heart. And we pause in our mad rush toward mechanically perfect reproduction of nature's implements of mastication and ask ourselves, "Are we on a solid foundation?" "Are our abutments seated on bed-rock, or are we building on the sand?"

The investigation of Billings, Rosenow, and others, relative to the mouth being a prolific focus of infection, accompanied by grave secondary manifestations, has been the cue for a more or less nation-wide scientific investigation by our leading dental pa-

thologists, with most interesting and educational results.

The purpose of this paper is to very briefly, but very emphatically, bring to your attention some of the salient points of this much-mooted question by presenting a few of the deductions and opinions of such men as Grieves, Rhein, Callahan, Best, Hartzell, Ottolengui, and others, and allowing you to pass sentence upon the question, "Are we doing, as individuals, and as a profession, all that within our power lies for the healthful preservation of the pulpless tooth?"

Dr. Hartzell, in a paper read before the Minnesota State Dental Association, June, 1915, says: "The pulpless tooth of the future must be handled by vastly different methods than the methods of the past to escape condemnation." And you say, "How shall this be done?" The technique of root canal preparation has been gone into by a few men scientifically, and

they give us accurately and minutely the result of their application of this technique.

Dr. Best, in February, 1916, number of *Dental Review*, page 154, gives a very concise review of his technique, and so definitely and plainly stated as not to be mistaken by any one. Time and absolute asepsis in the entire operation are basic and salient points of his technique. He advocates the use of the X-Ray at least three times during a root-canal operation.

Dr. Buckley says, in *Dental Review*, January, 1916, page 88: "I will not give a second seat to any one in the recognition I give and the value that I know is attached to the radiogram. Nevertheless, I want to say with all emphasis at my command, that I do not believe it necessary to check upon myself every fifteen minutes with an X-Ray. If I will put my energy and my brains into opening up of these fine tortuous canals, I know that I go dangerously near to the root-end by my technique. The reason we have gotten a black eye about it, and justly so, by the medical profession, is because we are not using the technique of Callahan and Rhein."

Dr. Grieves says, in an article appearing in *Dental Cosmos*, 1915: "I believe in, use and value radiographs, but they are far from the whole story." But the technique, as laid down by Callahan, Rhein and Best, of the root prepara-

tion, is unimpeachable. We must get to the end of the root.

But how are we to do this? All men who have studied out and are practicing scientific pulp surgery agree that operations upon root canals, being purely surgical, should be treated as such and the establishment of absolute asepsis should be obtained. Callahan says the maintenance of aseptic conditions is of first importance. Dr. Best says: "The thing that troubles us is that we have been unable to see the similarity between the opening into a vital pulp and the condition with which a surgeon deals when he creates a wound in his patient." Rhein, Grieves, Buckley, Ottolengui, and others, all stand for the importance of surgical asepsis to the ultimate satisfactory results in root treatment.

The technique required for perfect opening of canals is somewhat variable, being largely a question of the procedure which gets the desired results at the hands of the individual operator. Callahan, through twenty years of actual practical experience, still advocates the use of sulphuric acid solution and bicarbonate of soda solution. He says: "The sulphuric acid solution is used for the purpose of softening the surface of the pulp canal walls to permit the passage of barbed or roughened broaches to and fro through the canal, enlarging the canal by breaking loose the softened

dentine. Soda bicarbonate solution is injected that the broken-down dentine and other disorganized substances may be removed from the canal by effervescence caused by the escape of carbonic acid gas—the resultant of reaction of soda upon sulphuric acid. This reaction leaves the canal in a state of surgical cleanliness, which, to my knowledge, cannot be said of any other method or agent." Buckley advocates the use of phenol-sulphonic acid neutralized with soda bicarbonate solution because, he says: "Sulphuric acid if used too strong will char the tissue and carbonize the walls of the canals. With phenol-sulphonic acid you cannot carbonize, you cannot char anything that is in the canal."

Dr. Rhein advocates the use of sodium and potassium, as does also Dr. Ottolengui. Grieves says: "The pumping of sodium and potassium in the canal with its most efficient power of destroying soft tissue is apt to produce tissue necrosis in the apical area, often without infection but with liquefaction of bone and the apical fibers, denudation of cementum and necrosis of the apex." Rhein says: "It is essential that an area of healthy tissues be removed at the same time in order to be sure that no diseased tissue is left behind. This is precisely what sodium and potassium and ionic medication do when properly used."

Best advocates the use of

sodium and potassium and then introduce sulphuric acid which will neutralize the same, thus preventing any liquefying action which might result from its use. The instrumentation adapted to root canal surgery is again the choice of the individual. The file, as advocated by Dr. Best, would be perhaps wholly useless in the hands of many operators. The fine barbed broach passed along the side of the largest branch of the pulp is advocated by Dr. Callahan, followed by the fine Kerr drills manipulated by hand. The basic and all-important point in the technique, and one agreed upon by all scientific pulp surgeons, is accessibility to canal entrances, even at the expense of healthy tooth structure. Root canals must have definite and distinct opening and direct entrance so as to enhance the further and complete opening of the canal itself. The filling of this aseptically opened canal is doubtless the most discussed feature of the entire operation of root treatment. What shall be used as a material for proper root sealing? Shall this filling pass just to, not quite to, or beyond the apical opening? These are questions which are facing each of us and which are promoting most heated debate between dental pathologists.

Dr. Best, in a discussion of Dr. Hartzell's paper, read before the Minnesota State Dental Society, in June,

1915, says: "The failure to get a pulp canal filling to the apical region is not a crime, although many think it is so. The end of the root may be closed off by cystoids, and any infection that may be inside of that root may not go into the peri-apical space."

Dr. Grieves gives a somewhat extended discourse on the procedure at the root end, in a paper read before the State Dental Society of New York, at Rochester, May, 1915, under the subject of "The Problem of Complete Pulp Extirpation"; he goes on to say: "That every particle of pulp which it is possible to remove by the finest instrumentation and technique and with no regard for time consumed, should be removed, goes without saying; we are also convinced that the operation should be painful if the apex be vital, and the filling should end *to and in, but never through* the apex, with certain exceptions to be noted later."

The rather recent, and what might be termed too officious, surgical procedure in this area is to be deplored—we refer to the practice of intentional perforation, under broach manipulation with sodium and potassium—for the reason that it is not possible, even with the help of a radiograph, in the majority of adults, to look into a canal and to follow all its ramifications to the ultimate, and then on out intelligently into the pericement-

um, though it is easily done in the open canals of childhood and adolescence. Some sort of perforation can always surely be made, a gold wire passed, and radiographs taken—but is this the real vessel opening? Have we not added another chance for damage and infection of the surrounding tissues, and after all left the old one still containing a part of the pulp? And if we succeed in filling this new one, how are we going to fill the original opening we cannot find?

If there are other vessel openings at angles to the main canal, how are we going to excavate and fill any of these, when we cannot determine their presence by radiograph or sense of touch? Again, what is the idea in perforation, anyway? Presumably that every particle of pulp tissue be removed, but when it comes to a question of deliberate puncture that all vital pulp be removed, it were better to consume the time in conservation, and to stop just short of it—to remove the pulp to, but not through the apex.

Perforation of this region with a projecting filling is only permissible, we believe, in chronic alveolar abscess, to be followed by immediate apicoectomy is planned. It is simply inconceivable as routine practice and will reflect on our methods in the minds of all pathologists. A projecting filling invades a joint accommodating the sway of the tooth, and this

dependent upon the destruction of peridental fibres. This sway is present in normal teeth and more defined when periapical foundation has been destroyed. Extensions of gutta-percha beyond apical end all move as the tooth moves, which fact prevents encapsulation. It has been said that bone would build* about such sterile gutta-percha fillings, which fact, together with assurance of well filled roots, is given for such procedure. There is a radiograph proof that such is the case if foreign body be at rest but *never* when the body is moving as in a tooth.

Dr. M. L. Rhein, on a criticism of Dr. Grieves' paper, read before New York State Dental Society, May, 1915, says: "In reference to the protrusion of the root-filling through the foramina, it may be of interest to the essayist to learn that there is no intention to have the filling material do more than encapsulate the end of the root with gutta-percha. Gutta-percha is one of the most compatible materials that can be placed alongside the soft tissues, and it is well known that if it is used in this way with every regard to thorough asepsis, there is practically no reaction from the tissues. The therapeutic principle that is desired, and that is imperatively necessary, is that no place of possible habitation of wandering micro-organisms should be left in the per-

iapical area when the operation is concluded. This object can never be attained unless the periapical end of the foramen is sealed."

It is not the intent of the operator to force the gutta-percha through to any great distance, but in the act of attempting encapsulation, it very frequently occurs that the gutta-percha is forced there to an appreciable extent. This will produce some trauma, the same as follows ordinary surgical operations, but it soon passes away. It does not do what the essayist claims it does, viz., interfere with regeneration of bone tissue. On the contrary, the limited motion which takes place in this joint in no way imperils the condition of the gutta-percha or the normality of the structure in which it is placed.

Dr. Shields, in a discussion appearing in *Cosmos*, 1915, observes that a root is infinitely better sealed just to the end with gold, leaving the anatomical space at the apex of the root the same as before the pulp was devitalized—than to penetrate that root at its most critical point and allow the slightest extension of gutta-percha into the apical space.

Dr. Ottolengui asks the question: "Shall we carry our canal filling to or through the apical foramen?" And then goes on to say: "I think it makes a difference what the conditions are. For instance, if we remove an uninfected living pulp there

is no reason to believe that the pericementum is other than vital and healthy; consequently I see no reason why we should protrude broaches, wires, or gutta-percha, or anything else, through the apex of the tooth. Every precaution should be used to fill such a tooth to the foramen and no further."

But in the presence of infection the problem is quite different. Then is it that we must remember the possibility of the so-called multiple foramen, and the further possibility that the nutrient vessels which should occupy them have died. We need not worry about multiple foramina so long as the pericementum is living and healthy; but should it be dead so that the foramen are uncovered, then of course their contents must be counted as infected or at least infectious tissue.

The sterilization of these foramina having been completely accomplished, the canal must be filled with chlora-percha sufficiently fluid to force into the extra foramina, through the major foramen, out of which it should exude so as to flow over and around any part of the apex which is denuded of pericementum, thus not only coating the root end with an aseptic, non-irritant shield, but at the same time covering the outer openings of these extra foramina.

You are, indeed, all familiar with Dr. Callahan's

method of filling properly prepared canal roots. His resin (or rosin, as he calls it) and chloroform solution created much criticism for and against when he introduced the same to the profession. The principle of rosin filling is an old one, having been used some years ago, but was abandoned, due to its stickiness and difficulty in handling, but Dr. Callahan's mixture of rosin and chloroform offers a means of satisfactory manipulation.

He says, in discussion read even as long ago as July, 1911, before the National Dental Association: "A tooth treated in this manner (referring to technique for filling root canals with rosin, chlora-percha and gutta-percha cones) out of the mouth and made into a thinly ground slide will show that the tubuli are filled to the cementum with rosin. The canal is filled with a mixture of rosin and gutta-percha that is hard and insoluble in body fluids, does not shrink, and is compatible with surrounding tissue, as is chlora-percha."

In a paper read before the First District Society of New York, in March, 1914, he says: "Rosin and chlora-percha and cone is superior to chlora-percha in three ways: First, the rosin in chloroform penetrates deeply in the tubuli and foramina that chlora-percha will not enter at all, leaving within such tubuli and foramina, upon the disappearance of

the chloroform, a more or less solid, inert insoluble substance that enmeshes the contents and seals the lumina of such tubuli or foramina. Second, the rosin and chloroform causes the gutta-percha in whatever form it may be applied, to adhere closely to the walls of the root canal or cavity. Third, the incorporation of rosin in the freshly made chlora-percha makes an unshrinkable and impervious mass about the gutta-percha cone."

Dr. Dunning, who is an advocate of Dr. Herman Prinz's method of filling root canals with paraffin, in a discussion of Dr. Callahan's paper, observes: "Solidification through cooling involves less loss in bulk than solidification through evaporation. When a mass of paraffin, for instance, in a liquid state is chilled and becomes solid, there is, to be sure, a definite amount of shrinkage, but that amount is almost negligible as compared to the shrinkage of chlora-percha from which the chloroform has evaporated. Furthermore, the paraffin in process of shrinking, clings to the periphery of the root canals, or the vessel containing it, and becomes

depressed toward the center, so that in spite of the shrinkage there is still an absolute fit of that mass of paraffin against the wall of the tooth. On the other hand, as chlora-percha undergoes its shrinking process through evaporation, the mass of gutta-percha shrinks upon itself and leaves a crack at the periphery, varying of course with the bulk of the material."

The pro and con of root canal treatment is a big subject, and in the ratio of one to one thousand is its bigness to its importance. We, as individual members of this great profession, can ill afford to rest inactive and unalert to it. Individual research in this great problem is our earnest duty. Familiarizing ourselves with the principles is our goal.

The foregoing review of current literature on this subject has for its aim the emphasizing of the gross importance of this part of our work, so that "we may," to quote Dr. Best, "instead of making it one of the minor considerations, consider it equal in importance with any operation which we do in the human mouth."—*Michigan Dental Journal*.

Dr. Oscar Dowling, who was responsible for the first "Board of Health Train" which made a whirlwind campaign through the state of Louisiana a few years ago, distributing literature, health talk, and inspection that meant "clean up or shut up," is at it again with a new laboratory car which is completely equipped with all instruments necessary in bacteriological work and carries a small automobile which is sent out as soon as the car reaches the station to collect samples of milk and water for immediate analysis. Louisiana is bound to be a healthy spot if Dr. Oscar Dowling has his way. As a health officer, he's a steam engine in pants.

-:- EDITORIAL -:-

WM. W. BELCHER, D.D.S., EDITOR
186 Alexander Street, Rochester, N.Y.

ORAL HYGIENE does not publish Society Announcements, Obituaries, Personals or Book Reviews. This policy is made necessary by the limited size and wide circulation of the magazine. -:- -:-

A SUMMER VACATION

SUPPOSE every one present has had a vacation some time during the summer and is ready for the year's work. After attending the meeting of the National at Louisville, with the temperature at 100 degrees and everything boiled out of me but original sin, there was nothing to do but get as far north as possible and still be in the U. S. A. The coast of Maine seemed to fill the bill, but we compromised by taking a steamer at our very door and a ride on Lake Ontario to the Thousand Islands.

Here you can isolate yourself on an island, removed from the haunts of men, the daily paper or the telephone. Also you can stop at a hotel and pay a rate that enables the buccaneer who conducts the place to retire at the end of the short season and live in quiet elegance for the rest of the year. In either event you fish and tell lies about the big one that got away.

I met a number of dentists from all parts of the country. One of them was working on a boat, or rather he was helping the carpenter. I was greeted with, "Hello, Mr. Editor." "Hello yourself and see how you like it. I can't quite place you," I said. "You don't have to feel bad about that; my own mother wouldn't know me," was the response. He was "dressed up" in a coat of tan, an old shirt and a greasy pair of trousers that looked strong enough to do housework. Sufficient to say, he was having the time of his young life. Another dental friend spent his two weeks fussing around a motor boat. The motor wouldn't mote worth a cent. He had broken the ten commandments and all the skin on his knuckles, cranking the thing. After securing all the talent available to tell him what was the trouble and no results, he commenced to buy every dinkus in sight and replace portions of the mech-

anism. After his buckwheats and coffee he would spend every morning petting the engine. It would give a few faint coughs, just to show how badly it felt, and then go dead for the rest of the day. But he didn't give up and professed all sorts of confidence in the engine and acted as though it was a put-up-job that had been played on him when he wasn't looking. All he had to show for his labor was a burned neck and a peeled nose, but he had a zest for his food and slept like a log. He located the trouble the day before coming home and the engine worked like a hen in April with eggs at fifteen cents a dozen. But he was happy and declared he had spent a profitable vacation and ready to get down to brass tacks and work for a living.

With plenty of leisure we found time to attend church, and believe me, it was some service. It was held outdoors and the trip was by motor boat to Half Moon Bay, a distance of some ten miles on the Canadian side. There was a good attendance, with no confusion about your pew. The bay was filled with rowboats, canoes and gasoline launches of all kinds and description, decorated with American and British flags according to the nationality of the owner. As you sat in your own conveyance, you listened to a sermon delivered from "pulpit rock," a natural stone formation; also good singing and plenty of it. The Canadians beat us to it with, "God save the King," while the boats were untangling themselves preparatory to the trip home. A glorious sunset, with all the colors of the rainbow reflected on the fleecy clouds, helped to make this an ideal day. And in Europe the greatest catastrophe of modern times is being enacted. Men, the pawns of royal intrigue, are forced to march to the field of slaughter, and the roar of naval conflict is heard in every quarter of the globe. And we in peace and plenty, whole in body and health, with a summer vacation drawing to a close. Surely we are blessed.



Half Moon Bay and Pulpit Rock

ENGLAND RESTRICTS THE USE OF COCAINE AND OPIUM

BY a Royal proclamation, the British government prohibits the importation and prescribes the use of cocaine and opium. It is illegal to deal in, supply, give, purchase, or be in possession of either of these drugs. Exceptions are duly qualified physicians, registered dentists, registered veterinary surgeons, chemists or druggists, or a person holding a general or special permit. Preparations containing less than one part of cocaine to a thousand do not come under the regulations. Strangely enough, it is not necessary in prescribing a proprietary medicine containing cocaine to state the total amount of cocaine supplied; it is sufficient to state the total amount of the proprietary medicine.

In England, there are two kinds of practicing dentists; those having attended a British dental school and passed the examinations, and therefore "Registered," and those who are "Unregistered," but allowed to practice. Most of these work for the poorer classes who cannot pay high fees and there are many competent operators among them; also, a respectable number of American graduates with the degree of D.D.S., who number some brilliant men. They are unable to secure cocaine in their practice and must use novocaine, eucaïne, or some substitute in its place. The supply of these drugs has been practically cornered by the military authorities and the enforcement of the act, so far as cocaine is concerned, has been extended from the original date, July 28, to October 15, 1916. Up to this period, unregistered men can use preparations of cocaine containing one per cent. or less of the drug. It is expected there will be a sufficient quantity of these substitutes to meet the demand at the expiration of the extended time.

The use of cocaine has rapidly increased since the war and many soldiers invalided home have become addicted to the habit; its use also among the general public is an increasing evil. The new law is based on our own "Harrison Act" and the provisions are much the same. Those who prescribe the drug are not required to be licensed. England has fought wars and winked at all sorts of smuggling methods in order to force her Indian opium on an unwilling China. Now when the evil of opium and cocaine is brought home to her own door, she promptly does what she prevented China from doing.

The late Dr. J. B. Murphy, the noted surgeon of Chicago, left an estate valued at \$1,250,000. All excepting \$250,000 was in realty.

PLEASE PASS THE RADIUM

THE meeting of the Panama-Pacific Dental Congress at San Francisco last year was given up largely to the discussion of Pyorrhea. Papers, moving pictures and discussion at Louisville ran largely to the treatment and filling of pulpless teeth. One thing was made very plain—the dental profession in the past have been undertaking a lot of things that, in the light of our present knowledge, have been impossible.

The X-ray has shown us just how bad most of our crowns and "beautiful" bridgework really are and a detriment to the patient who paid for supposedly superior service. We have saved too many teeth that would have been better extracted; their retention have meant severe illness and even death.

Drs. Callahan and Price made some interesting statements. The former spoke of the necessity of a technique for filling root canals that would be safe and within the ability of people of limited means. Dr. Price mentioned the fact, in passing, that undoubtedly the most carefully treated and filled root canal would reveal remaining bacterial growth if such fillings were removed and cultures made, showing the possibility of every one becoming a foci of infection. The Research Bureau had made some experiments with Radiotherapy, of sealing these agents in root canals for a short period, thus producing an absolutely sterile field. They were not prepared to make even a tentative report on such procedure, but had strong hopes further experimentation might result in definite results.

Are we on the verge of a new spasm in dentistry? Is the X-ray passing and the newest thing Radium? Due to the work of the U. S. Bureau of Mines, radium has been reduced in price from \$120,000 to \$36,000 per grain, and if it keeps coming down, even dentists may be able to use it. Perhaps we can corral a grain or so at several central points and obtain radio-active agents at a reasonable price. The dentist who is able to invest a thousand dollars in this commodity will be known as the Radium Dentist, and the man who has a second-hand X-ray machine will be filled with envy and discontent.

Sir Hiram Maxim, in his recently published autobiography, presents the attitude of the past in regard to war expenditures and the present, which seem to be without limit. One of the Maxim guns, says Sir Hiram, was designed to fire a shell weighing about a pound. These shells were of course expensive, costing about \$1.60 each. On a demonstration of the gun before Li Hung-Chang it fired 400 of the shells, costing about \$650, in one minute. The old Chinese statesman, on being told the cost of the shells, said: "This gun fires altogether too fast for China." The King of Denmark's comment was: "That gun would bankrupt my little kingdom in about two hours."

NOTE AND COMMENT

"Here lies the body of Susan Louder,
She died while taking a Sedlitz powder.
Called from this earth to her heavenly rest,
She should have waited till it effervesced."

Dr. Woods Hutchinson, in a syndicate article appearing in the daily papers, has this to say of the dental hygienist:—

"It is an honor and a credit to the dental profession that the proposal for their training and employment should have come from it, even apparently against its own selfish interests and for the broader welfare of the community. Their entrance into the field of public health marks a new era in preventive dentistry and in the welfare and happiness of our children."

At the time of mobilization in Illinois, a number of medical students were members of the militia or the naval reserve, while others were anxious to enlist. The State Board of Health adopted a rule, that so far as the Board is concerned, full credit will be given the students in their school work while engaged in military service. Thus they will be able to resume their studies without loss of standing.

The possibilities of loss of gold in casting by the centrifugal method is shown in the report of a case where about twenty dollars worth of gold had been melted. In centrifuging, the investment broke at the bottom of the ring and the gold flew out. Despite a careful search of several hours, no trace of the gold was found. A microscopic examination of collected dust confirmed the assumption that, in being thrown out with great force, the molten gold had divided into dust. The sweepings were collected and about five dollars worth of gold recovered, the rest evidently having been lost in the form of finely distributed gold dust.

The following taken from the *Electrical News* appeals to the editor as distinctly worth while:—

"A man that's clean inside and outside; who neither looks up to the rich, nor down on the poor; who can lose without squealing; who can win without bragging; considerate to women, children and old people; who is too brave to lie, too generous to cheat and too sensible to loaf; who takes his share of the world's goods and lets other people have theirs—this is the ideal conception of a true gentleman."

Although we exported over \$140,000,000 worth of automobiles during the past year, it is less than one-fifteenth of the total manufactured in the United States.

The School for Dental Hygienists connected with the Rochester Dental Dispensary will open Monday, October 9th at 10 A. M.

For the first year the school will be divided into two sections,—the first for those who have had acceptable and satisfactory experience of not less than three years in the office of a registered and licensed dentist, or those who hold the registered medical nurse's degree; the second for those who have not had previous experience in a dental office, or taken the nurse's course of instruction.

The course for the first class will end about January 20th, next, so that candidates may prepare for the first state licensing examination.

The course for the next class will end about June 1st, in time for the second examination.

It will come as a surprise to many that the United States has forged ahead of Germany in the leadership of the cremation movement. There are fifty-three crematories here as compared to forty-eight in Germany.

With the war eating up a million gallons of "gas" a week, the British pleasure autoist with a six-cylinder car is on a German allowance of three miles a day. Commercial cars on munition work and government contractors are allowed a full supply, but by order of the Petrol Control Committee of the Munitions Department, your allowance is on a fixed percentage of what you customarily use. London cabmen are restricted to two gallons per day. The hansom cab and harnessed horse is very much in evidence. The storekeeper's delivery is upset and even the smart doctors are making their rounds in horse-driven vehicles. This war is as much one of motors as guns and men, and with the dearth of ships the limited supply of gasoline is needed for the army.

No business has been harder hit with this European conflict than that of the tourist agent. The agency of Thomas Cook, with branches all over the world, employed over sixteen hundred persons at the home office in London. These are now reduced to six hundred.

German and Austrian railroads always insisted upon Cook's buying tickets on their lines in advance. So it happened when the war started two years ago Cook had \$500,000 worth of German railroad tickets. Of course, Cook still has them. Will he always have them? Ask Germany.

European railroads and hotels will be in no condition to accommodate travelers for some years, and Cook, sometimes called "the earth's ticket agent," will have to wait.

A western specialist in dental radiography in an advertisement to the dental profession, says:—

"Low prices puts the X-ray within the reach of all—for instance:

Dental film, taking up to four teeth.....\$2.50

5 x 7 Plate, showing entire jaw..... 3.00

8 x 10 Plate, showing entire jaw..... 5.00"

A Chicago physician is supplying X-ray pictures at one dollar each. Thus doth the little busy X-ray flourish.

The meeting of the Preparedness League of American Dentists, held in conjunction with the meeting of the National Dental Association at Louisville in July last, was a most successful and enthusiastic affair. Papers were read by Drs. J. D. Patterson, H. J. Burkhart, H. E. Friesell, Homer Brown, H. A. Pullen, and Lieutenant Boak, representing the War Department.

A resolution was adopted endorsing the League and recommending the appointment of a committee of five members of the National Dental Association to act with the present officers of the League. Thus it becomes an affiliated body and is under the control of the association, and the annual meeting of the League will be held at the same time.

A great work is ahead of the League and the readers of *Oral Hygiene* will be kept informed of its progress.

The National Association for the Study and Prevention of Tuberculosis, coöperating with the Metropolitan Life Insurance Co., who have provided a fund of \$150,000, are about to conduct a campaign against tuberculosis in a Massachusetts or New York town of about 10,000 population, in an effort to eradicate the disease.

The cost of white paper means an added expense of \$4,620 per annum to the publishers of *Oral Hygiene* beginning October 1st. For the year's edition, four carloads of paper will be used. Each carload represents 40,000 lbs., a total of eighty tons, all of which goes through the mails under two cents postage per copy.

A recent issue of the *Pittsburgh Sunday Post* devotes a page to "How hidden teeth troubles cause deadly disease. Bright's disease, heart failure, rheumatism, and insanity caused by germs hidden under defective fillings. Why we should have our jaws X-rayed." This is accompanied by numerous illustrations which show just how these harmful germs get into the circulation. Much of this is "tommy rot," and it is to be seriously questioned if dentistry is to be permanently benefited by such methods of publicity.

Dr. Harold DeWitt Cross, Director of the Forsyth Dental Infirmary, reports the following:—

The percentage of service refused as unworthy figures 2.4 and the expense per child for investigating the case costs approximately .0179 cents.

An anonymous donor has offered a prize of \$10,000 for the best artificial hand. Dentists and others are invited to compete, but they must belong to allied or neutral nations. They are to demonstrate before the French Surgical Association, mutilated men using their apparatus for at least six months. The apparatus rewarded is to remain the property of the inventor. Competition will be closed two years after the end of the war. Persons wishing to compete should write M. le Secrétaire General de la Société Nationale de Chirurgie, 12, rue de Seine, Paris, France.

The Bureau of Standards, New York City, in an exhaustive report, recommends a minimum wage of \$840 per year for unskilled labor, as it has ascertained that a standard of living consistent with American ideals cannot be maintained in the city for less. A list of wages for municipal employees follows, and it is interesting to note that of the dentist.

"The pay of architects should run from \$900 to \$4,560, the report says, but that of bacteriologists from \$1,500 to \$3,060; chemists, \$900 to \$3,660; dentists, \$1,500 to \$1,740; dieticians, \$720 to \$2,820; engineers, \$4,860 to \$6,000; pathologists, \$2,280 to \$3,420; physicians, \$900 to \$3,480; psychologists, \$1,500 to \$1,920; lawyers, \$5,100 to \$9,000."

Detroit is Americanizing the foreigner within its gates. The Board of Education increased its appropriation for evening schools from \$35,000 to \$87,000, allowing the opening of nearly thirty schools in various sections of the city. The results show that in the period from January to June, 1916, there was registered a gain of 107 per cent in the number of applications for citizenship papers.

In addition to the proposed dental school in connection with Columbia University, a course of lectures on dentistry is planned for medical students. These lectures aim to furnish the medical student with a knowledge of the fundamental principles in the proper care of the teeth, and will emphasize the close relationship between the diseases of the body and defective teeth. The dental specialists who will deliver these lectures are Drs. Leuman M. Waugh, Arthur H. Merritt, William B. Dunning, Harold S. Vaughan and Henry S. Dunning.—*Journal of the A. M. A.*

A dental clinic will be started by the Boston Dispensary next Monday evening. It is established because of the great need for service to people who cannot take time during the day. The staff will be appointed by the dispensary on the nomination of the Harvard Dental School. Dr. Kurt H. Thoma will be in charge. Fees will be charged to cover the cost of service. The clinic will do all needed work on the teeth, including cleaning, extraction, filling and other treatment. It will be open Monday and Friday evenings beginning at seven o'clock at the Dispensary Building at 25 Bennet street.—*Boston Evening Transcript*.

While we complain of the increased cost of living due to the European war, South American countries, particularly Argentine, are feeling the pinch most. It costs \$1.71 for a cake of toilet soap and eighty cents for an ordinary tooth brush; gloves are \$7 a pair, winter underclothing \$10 a suit, and American shoes costs you \$15 a pair. The cheapest cigar is eight cents and those from Havana cost from 44 cents up. A four-room heated flat \$110 per month—minus heat, \$52.80. Coal is \$28 to \$40 per ton and hard to get even at that price. Meat, milk, eggs, tea and coffee are about the same as in North America, but the expense of living is about double that of Chicago or New York.

The following appeared as an advertisement of a mechanical laboratory; part of a letter from one of their patrons. How is this for "short order" dentistry?

"I am in the habit of taking my impressions and bites and sending them to you folks and let you finish my laboratory work and send it to me at my home office where I can look it over, but I had a patient living in the town where I have my second office, who was going away on the same train that I came in on and I was anxious to get his work in and get the check. I made arrangements with the engineer and conductor, both of whom I knew real well, to hold the train, which is a combination freight and passenger, for five minutes. On arrival I jumped into an automobile, went to my office, found the package all right, grabbed some cement and beat it to the depot, sat the patient in a chair and set that bridge without having to touch it. I knew you folks would do your part by having the work there as you never have disappointed me yet, so it wasn't so much of a job at that."

The Board of Education, Cortland, N. Y., is about to install a dental dispensary for the care of school children. The local dentists have volunteered to furnish the first year's services.

The production of gold in the United States for 1915, according to government reports, is valued at \$101,035,700. This is seven million dollars more than 1914. Silver production for the same period amounted to 74,691,075 fine ounces valued at \$37,397,300. This also is an increase over 1914.

Three dental motor ambulances for service in the French army will leave for the front shortly. They are being sent out by the London committee of the French Red Cross. One of the ambulances was presented by a private philanthropist, another by the city of Glasgow, and the fittings of the third by a manufacturer of dental materials. Each is operated by two dental surgeons and a chauffeur-mechanic, and costs approximately \$4,500, which includes nearly a thousand dollars for equipment.

We are fortunate indeed if we can escape the backlash that seems inevitable after this war is over. The following from a local banking house show our business interests are keenly alive to this possibility:—

"Returns just published show that American industrial corporations are accumulating cash as no other corporations in the world's history have ever accumulated it. This is being done with the twofold purpose of providing for the readjustment which must follow the ending of the war, and with the idea of enlarging working capital so as to provide for possible needs for years to come. Eighteen steel, copper, and motor companies show total cash resources today of \$348,400,000. This means a gain for the year in such resources of almost 100 per cent.—a record unparalleled in the history of corporations—and is the more remarkable when the huge outlays (out of earnings) by these concerns for dividends, improvements, and betterments are taken into account. Some plants have written off expenditures for the special equipment required to complete the contracts for foreign governments. Others have made such alterations as will enable their plants to produce the sort of material that was produced before the war started. Managers of still others have turned down proposals to provide for large cash or stock dividends, claiming that these were abnormal times, and that unprecedented earnings could not be expected to continue after the war ends."

Dr. Lewis Ottogy, Manila, Philippine Islands, reports the dental examination of 2,075 children in the Meisic primary school, of whom 1,034 were girls and 1,041 boys—total number of teeth examined 51,892, of which 35,375 were sound and 16,519 decayed. Thirty-seven interesting abnormal and deformed teeth were found. Only 44 of the children had complete sound sets of teeth, while only 43 have had any reparative dental work. As only one of the children needs no further dental service, it is found that out of a total of 2,075 children so far examined, no less than 2,030 are in need of immediate attention.

One of the most beautiful stories of the war, and a love that passeth understanding, is that of a Rabbi serving as a chaplain in Flanders, who was asked by a dying French soldier to unbutton his tunic and hold the crucifix he was wearing so that in his last moments his eyes might rest upon that symbol of faith and love. With a fine humanity, the Jew held up for the comfort of the dying man that which stood for the condemnation of his own people.

The Preparedness League of American Dentists, now being affiliated with the National Dental Association, has been requested by a representative of the War Department to prepare a list of all dental surgeons who will accept compulsory service in time of war under the commission and pay of first Lieutenant in the Army Reserve Dental Corps. It is the desire as well as duty of the League to relieve the department of the work entailed in preparing this list, as well as all other matters relating to dental service for the army, so far as it may be called on to assist. Send all names and full address, stating age, experience, college, whether members of the National Dental Association or other societies, to Preparedness League of American Dentists, 3 Professional Building, Buffalo, N. Y.



HEARD IT AFORE

FUNNIES

We want good clean humor for this page and are willing to pay for it. Send me the story, that appeals to you as "funny" and if I can use it, you will receive a check on publication—Address EDITOR, 186 Alexander Street, Rochester, N. Y. -:- -:- -:-



THAT'S A GOODUN

A RED headed boy applied for a job in a butcher shop.

"What can you do?" the boss asked him.

"Anything at all," he replied. "How much will you give me?"

"Three dollars a week, starting in to work now. What can you do around a butcher shop?"

"Anything."

"Can you dress a chicken?"

"Not on three dollars a week," said the boy.

WILLIE was very proud of the big round badge his father brought him from the automobile show. On one side was the picture of an automobile and on the other a motto. He wore it to Sunday School. The pastor walked down among the "scholars" smiling upon each bright-faced boy and girl. The badge attracted his attention.

"Ah, my son, what have you there?"

"That's my golden text," answered Willie.

"And what does it say?" Willie held it up for inspection. The pastor's fatherly smile suddenly stiffened as he read, "Ain't it Hell to be Poor?"

HE was a coal black negro and on trial for making whiskey.

"What's your name," asked the presiding Judge.

"Josuah."

"Are you the Josuah that made the sun stop," asked the Judge jokingly.

"No sah, you Onah, I'm Josuah what made the moonshine."—S. S., Boston, Mass.

A minister crossing the Atlantic for the first time, became terribly alarmed when

the vessel encountered a bad storm, and sank to his knees in prayer. The captain appeared, and jerking him to his feet said, "You'll have to cut that out, as it is liable to cause a panic." Leading him to a portion of the vessel where the stokers could be observed shoveling coal and swearing at their task, the captain asked: "Do you think those men would be swearing like that if they thought there was any danger?" The minister returned to his stateroom satisfied. During the night the storm increased in fury, and crawling on his hands and knees, he again observed the busy stokers and exclaimed, "Thank God, they are still swearing."—H. W. C., Columbus, Ohio.

AN Irishman on a strike, passing a second-hand book store, saw a card in the window reading: Dickens Works—This Week For Six Dollars.

"The dirty Scab!" said Mike.—S. G. W., Lakewood, N. J.

"Do you know why the little chickens come out of the eggs, dear?"

"Course I do. They know they'd get boiled if they stayed in."

BOOSEY BILL—Once I was in a fair way of makin' a fortune. But a labor saving device ruined me.

BOOSEY SECOND—(lazily) Speak on, Macduff.

BOOSEY BILL—I was gettin' on nicely as a barman in a saloon when the boss bought a cash register.